AMENDMENTS TO CLAIMS

Listing of claims:

1.   (Canceled).

2.   (Currently Amended) ~~The telecommunications network of claim 1, wherein said switch further comprises~~<u>A telecommunications network, comprising</u>:

<u>a.   a switch for handling a VOIP call, said switch handling, in connection with said VOIP call, a series of signaling messages; and</u>

<u>b.   a monitoring system coupled to said switch, said monitoring system identifying service deficiencies by examining, in chronological order, said series of signaling messages handled by said switch in connection with said VOIP call; wherein said switch further comprises:</u>

~~a.~~<u>i.</u>   a plurality of call processors, each handling selected ones of said series of signaling messages in connection with said VOIP call; and

~~b.~~<u>ii.</u>   a plurality of signaling message files, each coupled to a corresponding one of said plurality of call processors, for maintaining said selected ones of said series of signaling messages handled by said corresponding call processor.

3.   (Original) The telecommunications network of claim 2, wherein said monitoring system further comprises:

a.   a first software tool;

b.   a sorted signaling message file coupled to said first software tool, said first software tool merging said signaling messages maintained in each one of said plurality of signaling message files into said sorted signaling message file, said signaling messages from said plurality of signaling message files arranged, in said sorted signaling message file, in chronological order; and

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c.   a second software tool coupled to said sorted signaling message file, said second software tool examining, in sequence, each one of said signaling messages maintained in said sorted signaling message file and determining, based upon one or more of said examined signaling messages, if a warning or error message should be generated.

4.   (Original) The telecommunications network of claim 3, wherein said monitoring system further comprises a warning/error message file coupled to said second software tool, said second software tool constructing an warning or error message using information contained in said one or more examined signaling messages based upon which said second software tool determined that said warning or error message should be generated.

5.   (Original) The telecommunications network of claim 3, and further comprising:

a.   a customer information file coupled to said second software tool; and

b.   a warning/error message file coupled to said second software tool;

c.   wherein said second software tool constructs warning or error messages using information contained in said one or more examined signaling messages based upon which said second software tool determined that said warning or error message should be generated and information in said customer information file related to an IAD customer.

6.   (Original) The telecommunications network of claim 5, wherein said second software tool determines that a warning message should be generated upon determining that excessive time has elapsed between generation of a signaling message requiring an acknowledgement and receipt of that acknowledgement.

7.   (Original) The telecommunications network of claim 5, wherein said second software tool determines that a warning message should be generated upon determining that excessive time has elapsed between a customer going off-hook and receiving dial tone.

8.   (Original) The telecommunications network of claim 5, wherein said second software tool

determines that a warning message should be generated upon determining that excessive packet

loss has occurred during a VOIP connection.

9.   (Currently Amended) A method for proactively monitoring signaling messages ,

comprising:

> a)   establishing a data file having a plurality of entries, each entry in said database
>   describing a customer served by a service provider;
>
> b)   examining a set of signaling messages related to a VOIP call to identify a service
>   deficiency for a customer;
>
> c)   generating a warning message containing information regarding said identified
>   service deficiency from said set of signaling messages and information from an
>   entry in said data file describing said customer; and
>
> d)   upon reviewing said generated warning message, said service provider initiating
>   corrective action to proactively rectify said identified service deficiency for said
>   customer.

10.   (Currently Amended) The method of claim 9, and further comprising:

> a.   acquiring, by a first call processor operated by said service provider, a first portion

of said set of signaling messages related to VOIP call;

> b.   acquiring, by a second call processor operated by said service provider, a second

portion of said set of signaling messages related to said VOIP call; ~~and~~

> c.   acquiring, by a third call processor operated by said service provider, a third

portion of said set of signaling messages related to said VOIP call; and

    d.   producing said set of set of signaling messages by merging said first and second

portions of said set of signaling messages in a chronological order.

11.   (Original) The method of claim 9, and further comprising the steps of:

    a.   acquiring said set of signaling messages related to said VOIP call; and

    b.   arranging said acquired set of signaling messages in a chronological order.

12.   (Original) The method of claim 11, wherein said set of signaling messages are

sequentially examined in said arranged chronological order.

13.   (Original) The method of claim 12, wherein examining said set of signaling messages

further comprises:

    a.   identifying a first signaling message which requires a reply;

    b.   subsequently identifying a second signaling message which contains said reply to

said first control message; and

    c.   determining if a time period separating the arrival of said first and second control

messages is acceptable.

14.   (Original) The method of claim 13, wherein said warning message is generated if said

time period exceeds a pre-selected threshold value.

15.   (Original) The method of claim 13, wherein said first signaling message requires an

acknowledgement of receipt and said second signaling message contains said acknowledgement

of receipt of said first signaling message.

16.   (Original) The method of claim 13, wherein said first signaling message indicates that

said customer has gone off-hook and said second signaling message indicates that tone has been

requested for said customer.

17.   (Original) The method of claim 12, wherein examining said set of signaling messages

further comprises:

a.   identifying a first signaling message which contains bearer path data from said

subscriber;

b.   subsequently identifying a second signaling message which contains bearer path

data from said second subscriber; and

c.   determining packet loss between said first and second subscribers from said bearer

path data contained in said first and second signaling messages.

18.   (Original) The method of claim 17, wherein said warning message is generated if said

packet loss exceeds a predetermined threshold value.

19.   (Original) The method of claim 12, wherein examining said set of signaling messages

further comprises:

a.   identifying a first signaling message which requires a reply; and

b.   generating said warning message if a signaling message which contains said reply

to said first signaling message is not identified in said set of signaling messages.

20.   (Original) The method of claim 19, wherein said first signaling message indicates that

said customer has gone off-hook and said signaling message which contains said reply but which

was not identified in said set of signaling messages would have indicated that said customer had

received dial tone.